

Science and Psychical Research.

As I shall be shortly leaving for New Zealand, perhaps a little space may be granted me to reply to a number of letters which have appeared in the recent issues of *NATURE*, from the pens of Sir Bryan Donkin, Mr. Campbell Swinton (3), and Mr. E. J. Dingwall.

Some of the confused thinking represented in these letters may perhaps be stopped if I explain the genesis of the original article which has provoked the discussion. The editor of *NATURE* asked me to write a review of Sir Arthur Conan Doyle's book *from a scientific viewpoint*, and I said I would try to do it. After reading through the two volumes very carefully, I concluded that there was nothing scientific about the book. I do not care for merely destructive criticism, as I think that a badly written book is its own worst condemnation. Also I am not yet so far removed from youthfulness as to have forgotten what I owe to the talented author, for giving us, long ago, "The White Company" and the adventures of the immortal Sherlock Holmes. So I told the editor that I had decided not to undertake the task. He then suggested to me that I should write an "essay review"; that is, using the book as a peg, I should hang upon it a dissertation on a cognate subject of scientific interest, namely, psychical research. I accepted this offer, and chose the subject which has started the present discussion. Apparently it sufficed for some minds to draw the conclusion that, because my essay was hung upon a spiritualistic peg, therefore psychical research is the same thing as spiritualism! No doubt, if I had written an essay review on the subject of evolution, hanging it upon a book on neo-Lamarckism, let us say, as a peg, the same type of mind would deduce that this indicated that evolution was the same thing as neo-Lamarckism!

That psychical research and spiritualism are not at all the same thing can be easily demonstrated, I think, if we take the cases of two famous exponents of psychical research already more or less discussed in these letters. I refer to Lodge and Richet. Both are admittedly psychical researchers of the first rank. Lodge is also a spiritualist, having come to the conclusion that survival is proved from his interpretation of the facts of psychical research. Richet, admitting the truth of the same set of facts, but interpreting them from a very different viewpoint, is still a kind of 'super-materialist,' absolutely and irrevocably opposed to the spiritistic hypothesis, which he holds is disproved by some of the very facts of psychical research! Could anything be plainer, then, than that psychical research and spiritualism are two entirely different things? What should we say of the mentality that confused biology with neo-Darwinism or with neo-Lamarckism? What are we to think of those who confuse a line of experimental research with one of the hypothetical conclusions which, in the opinion of only a portion of the researchers, arises out of it?

Let me now reply more particularly to Mr. Campbell Swinton, who has been a fair and, on the whole, courteous opponent, though sadly tempted at times, I fear, to let out and say what he really feels. Perhaps I may be ready to meet him half-way in his criticism that the medium is not absolutely comparable with the microscope or the chemical balance; I ought perhaps to have used a closer simile and likened the medium rather to the catalytic agent, the presence of which is essential to the production of the phenomena in certain types of chemical change. What I wanted to bring out, and what I still maintain, is that a genuine medium is not *actively* a participant in the experiments; the phenomena are produced *through*

some extended action of his subconscious mind, but not by active volition on his part.

Mr. Campbell Swinton ought to know that a set of negative results in an experiment does not prove anything when confronted with even a single well-authenticated positive result from the same experiment. How many times have we, who have taught chemistry in schools, seen some of the most carefully prepared experiments fail to succeed, to the great delight of the assembled class? Yet, once the positive result is obtained, the acute mind of the boy knows at once that the negative results are cancelled, and one good demonstration is enough for him. It is only muddled thinking of the adult mind which persists in quoting a series of negative results as decisive.

As regards psychic photography, the decisive positive result, in my opinion, has never yet been obtained. So, in this particular case, I entirely agree with Mr. Swinton that there is a *high probability* that there is nothing in it. Many psychical researchers think the same; but spiritualists, on the whole, believe the opposite. The question could be settled once for all, to everybody's satisfaction, if one of the alleged photographic mediums would consent to experiment under absolute test conditions in which he would not be allowed to handle the plates or to have access to them at any stage of the proceedings. But I venture to think that it will be a very long time before any such thing as this is likely to happen.

I think it is rather hard that all my critics should waste so many words on trying to prove that I am a spiritualist and that spiritualism is a delusion. If any of them had come to the National Laboratory of Psychical Research last week they would have heard my address on this very subject, in which I took the stand that the spiritistic hypothesis does *not* fit in with all the known facts of the case, and pleaded for a more thorough and scientific study of the phenomena, with the view of finding a general theory "which should harmonise all the discoverable facts in the same way that Darwin's great theory of Evolution harmonised all the known facts of biology." Surely Mr. Swinton, at any rate, will concede that I have never diverged from that view in the whole of this long discussion?

I am sorry that Mr. Swinton departed a little from the high level of his debate in the last paragraph of his letter in *NATURE* of September 25. The words *suggestio falsi* sound, to my ears, somewhat offensive, especially as the idea behind them has been derived from the second-hand information of mischief-makers, and has not been verified by Mr. Swinton himself. There are more than six hundred firms, associations, and companies in the London Telephone Directory having names beginning with the word 'national'. I think I need say no more than that we can justly claim to be quite as national in our organisation and outlook as most of them. But as an excuse for refusing my invitation the objection to the word is surely puerile. Why does not Mr. Swinton say that he has never in his life been to a séance and never intends to go to one? I would have preferred this direct statement to the somewhat unkind and unworthy innuendo which he makes instead. But, in any event, Mr. Swinton stands self-confessed as an illustration of the type of scientific man about whom I wrote my article, namely, the man who presents "an unscientific attitude to the subject of psychical research." I claim that the letters written by him and my other correspondents fully prove my point.

Mr. Swinton's remarks in his last letter, published in *NATURE* of October 9, are entirely correct and in agreement with my own views, except for his last paragraph. I never classed Richet with Crookes and Lodge "as a spiritualist" but only as a psychical

researcher. To do so would be "most misleading" if I had been dealing with spiritualism, but I was not. The title of my essay was "Science and Psychical Research," not "Science and Spiritualism." My plea to men of science is for a more scientific attitude of mind *towards psychical research*, not towards spiritualism.

Sir Bryan Donkin has gratuitously given his own interpretation to the words "supernormal phenomena," thereby ruling out all those manifestations which I consider to be the key to the whole situation. I have more than once stated that I do not know the difference between trance and sleep. If Sir Bryan does, will he please tell us? If he does not, why does he take up an attitude which will forever prevent the problem being solved? If some of our leading medical men would spare a little time, even though they be, as I am, hard-worked to the very limit, we should soon know something about this mediumistic state. But I have seen excellent supernormal phenomena produced with the medium wide awake and absolutely controlled and immobilised in good light; so the question as to what trance may or may not be does not touch the essentials of my argument. Sir Bryan cannot have it both ways. If he is opposed to the scientific examination of the trance state, then he takes an unscientific attitude towards this phenomenon and is another of those to whom my article was addressed. But if he thinks it ought to be studied, then he should range himself on my side in this discussion.

Mr. Dingwall, I can surely claim, agrees with me, for he uses my very words in his last paragraph. He says, "There is a good case for the scientific study of what are called supernormal phenomena." That is exactly what I said too! But the rest of his letter shows clearly what he wanted to imply, namely, that Dr. Tillyard had not seen enough supernormal phenomena to enable him to judge rightly. I concede readily that I have not seen anything like so much as Mr. Dingwall; if he were logical, he would *a fortiori* exclude Mr. Swinton and most other men of science from this discussion, as they have not even seen as much as I have seen. Why pick me out and leave them in?

Mr. Dingwall asks, very pertinently, "Can Dr. Tillyard tell us of any single medium who can produce some simple raps, under conditions which render their normal reproduction impossible?" Yes, I can. Stella C. has repeatedly, both in my presence and in that of many others, produced such raps inside a close Pugh Table at a distance from herself. Mr. Dingwall will doubtless criticise this experiment, as he has done to me personally, on the ground that, as the box is closed, nobody could really see what was going on inside it. Yet, in his report on the Margery mediumship he says that he particularly requested that the phenomena should be done inside a closed box, and, when this request was refused, he regarded it as highly suspicious. In other words, Mr. Dingwall is always ready with an argument *against* any particular experiment, even though his objections mutually destroy one another.

I would like to assure Mr. Dingwall that it is not the number of sésances that a man attends, but his capacity to draw definite conclusions, which really matters. Mr. Dingwall has attended hundreds, but he is still in a mental fog, just like the schoolboy whom we all know, who may be given an experiment to do many times over, but can never make a clear deduction from it. I am quite content with the eight sésances which I have attended. In two of them, undoubted evidence of fraud was easily discoverable. In one other there was no analysable result. In the other five, with three different mediums, definite supernormal results

followed under strict test conditions. In other words, I have obtained, *five times over*, a definite proof that supernormal phenomena do undoubtedly occur, and so I join the ranks of those who, like Lodge and Richet, are convinced of this fact. No amount of negative evidence can outweigh these positive results. Let me also assure Mr. Dingwall that I am not very likely to add largely to my psychic experiences, not being a hunter after sensations. I have seen Sir Ernest Rutherford's experiment on the bombardment of the atom demonstrated twice. It is enough. I accept the fact that the atom can be broken up, and no longer desire to go on attending lectures which keep on proving the same thing. I have seen supernormal phenomena in abundance produced at five controlled sésances. It is also enough to convince me that they occur. What is the true explanation of them remains still to me at least a partial mystery; according as the evidence may unfold itself in the future, I may yet find myself with either Sir Oliver Lodge or Prof. Richet.

Finally, let me again plead for a more scientific attitude of mind on the part of men of science towards psychical research. Perhaps I may live to see it, if I succeed in attaining the allotted span.

R. J. TILLYARD.

REFERRING to the discussion on this subject in previous issues of NATURE, might one ask: Is there not confusion regarding the aims of science and of psychical research, which at present are fundamentally dissimilar? We know that the object of experimental science, as distinct from philosophy and mathematics, is to obtain control over the energies of Nature by learning the laws inherent in matter; that science has never set a limit to the varieties of matter; that, consistent with its purpose, it accepts facts as it finds them; and that its function, *qua* science, has never been to prove *a priori* conceptions. Some of us forget, however, that the elementary conditions essential for the pursuit of its object are not compatible with the objects and conditions of psychical research. By way of contrast a simple statement of scientific requirements might be made as follows:

1. The first two indispensable and interdependent factors in any scientific problem are the trained research worker and *something to be examined*. The thing to be examined may not have been contacted by all the physical senses, as, for example, electricity; but it must have been experienced by means of one sense-faculty, at least, before it will come to the attention of human beings or within the range of scientific research. (Scientific instruments are merely the extension of our physical senses.) It was not necessary to prove the existence of electricity; the problem was first, how to induce, and second, how to control or direct it.

2. It is essential for real scientific research that the matter investigated be, to some extent at least, under the control of the investigator, and this is possible only through his knowledge of the laws which describe the action of energy under certain specified conditions.

3. Science has advanced each step in its progress on the knowledge of laws already ascertained. Much was known concerning the chemical elements and conductive materials before electro-chemical phenomena could be investigated. Every factor in an experiment cannot be new.

4. Science requires for each advance a working hypothesis or theory about what is next to be discovered. The theory may be proved wrong, but nothing at all can be attempted in fresh fields without